Electronics index

Technical articles

Volume 37, 1964

Technical articles

A

ADVANCED TECHNOLOGY

Comeback for wireless power? p. 86 Sept. 21
Conditioned-reflex circuits p. 66 Aug. 24
Cryogenic flux pump switches high currents p. 61 Mar. 23
Evaluating light demodulators p. 54 Apr. 6
IEEE preview p. 35 Mar. 13
Microwaves for remote sensing p. 66 Nov. 2
P-n junctions as radiation sources p. 61 July 13
Research in microwave acoustics spawns compact delay lines p. 69 Nov. 30
Storage orthicon holds image for hours p. 36 Mar. 6
Ultrasonic approach to data storage p. 67 May 4

AMPLIFIERS

Amplifier can be adjusted to cancel unbalanced noise p. 60 Aug. 24
Amplifier improves peak voltmeter response p. 73 Apr. 20
Basic uhf circuit forms amplifiers and multipliers p. 59 July 13
Buffer supplies bipolar output p. 75 July 27
Circuit protects amplifier against short circuit p. 61 Aug. 24
Combined feedback stabilizes amplifier p. 76 May 4
Complementary amplifier offers high input impedance p. 92 May 18
Compressor amplifier features balanced push-pull circuit p. 36 Jan. 24
FET micropower amplifier p. 74 Dec. 14
Field-effect transistor as high-frequency amplifier p. 71 Dec. 14
Getting transistors into single-sideband amplifiers p. 72 June 1
High-gain d-c amplifier drives crt display p. 53 June 29
How to design micropower transistor amplifiers: part 1 p. 73 May 18 part 2 p. 48 June 1
Operational amplifier suppresses third harmonic p. 74 Apr. 6
Optoelectronics at work p. 58 July 27
Paramp system achieves high stability p. 34 Feb. 28
Servo comparator amplifier handles high voltages p. 75 Aug. 10
Squeeze in more components by adding a micro amplifier p. 73 Mar. 23
Symmetrical limiting i-f reduces second harmonic p. 72 Mar. 23
Variable resistor controls differential amplifier gain p. 74 Nov. 16

ANTENNAS

Lens-line antenna: low noise, less space p. 25 Feb. 28
Practical log-periodic antenna designs p. 91 May 4
Rotating subreflector produces circular scanning p. 44 Feb. 14

AVIONICS

Cutting through clutter in flight-control radar p. 83 Aug. 10
Digital loran-C receiver uses microcircuits p. 23 Jan. 31
Light-airplane marker-beacon receiver p. 33 Jan. 17
Majority voting protects aircraft and pilot p. 85 May 18
SST: challenge to avionics designers p. 60 Sept.7
Wanted: ways to spot rough air p. 49 Feb. 7

C

CIRCUIT DESIGN

Added capacitor sweeps power supply p. 62 June 1
Added transistor decreases multivibrator reset time p. 72 July 27
Advantages of free-running cascode multivibrators p. 28 Jan. 31
Amplifier can be adjusted to cancel unbalanced noise p. 60 Aug. 24

This abridged index lists only technical feature articles. A separate, complete index is available to readers and libraries for $1.00. Attractively bound, the complete 1964 index catalogs all articles—technical features, newsletter items, Electronics Review, Electronics Abroad, and Probing the News stories — manufacturers mentioned in these articles, and advertisers.

For a copy, send $1.00 to:

Reprint Manager, Index
Electronics Magazine
330 W. 42nd Street
New York, N.Y. 10036

Amplifier improves peak voltmeter response p. 73 Apr. 20

Analog switching circuits use field-effect devices p. 46 Dec. 28

Basic uhf circuit forms amplifiers and multipliers p. 59 July 13
Buffer supplies bipolar output p. 75 July 27

Chart provides alpha components p. 72 Nov. 16
Checking oscillation in cathode followers p. 52 Oct. 19
Circuit always applies correct operating voltage p. 77 Sept. 21

Circuit protects amplifier against short circuit p. 61 Aug. 24

Cold-cathode gas tubes switch high voltage fast p. 72 Apr. 20

Combined feedback stabilizes amplifier p. 76 May 4

Comparator controls battery charging rate p. 72 Mar. 23

Complementary amplifier offers high input impedance p. 92 May 18

Complementary shaper replaces Schmitt trigger p. 66 Oct. 5
Constant-current source controls sweep rate p. 82 Sept. 7
D-c voltage converter needs no transformer p. 64 Nov. 2
Designing with low-noise MOS FET's: a little different but no harder p. 53 Dec. 14
Diamond circuit measures phase shift p. 74 Sept. 21
Diode-coupled Schmitt trigger p. 50 Dec. 14
Displaying the contents of a computer register p. 72 July 27
Double-tuning simplifies superhets p. 39 Jan. 24
Electronic timer provides long delay p. 63 June 1
Electronically controlling auto's engine spark p. 43 Dec. 28
Field-effect transistor controls pulse oscillator p. 80 June 15
Four-layer diodes form staircase generator p. 55 July 13
Four-terminal controlled switch divides frequencies by 10 p. 81 June 15
Frustrating problem of inductors in integrated circuits p. 50 Mar. 13
Gate circuit eliminates pedestal effect p. 77 May 4
Generating two rectangular waves p. 82 June 15
Germanium transistor as avalanche switch p. 44 Nov. 30
Graphs aid deflection system design p. 59 Feb. 7
High-current converter is small, quiet, low-cost p. 41 Nov. 30
High-efficiency voltage regulator p. 64 Aug. 24

High-gain d-c amplifier drives crt display p. 53 June 29

High performance voltage regulator p. 75 Apr. 6
How modules make complex design simple p. 50 Dec. 28
How to design high-speed d-a converters p. 28 Feb. 21
How to design micropower transistor amplifiers: part 1 p. 73 May 18 part 2 p. 48 June 1
How to suppress rate effect in pnpn devices p. 30 Jan. 10
Insurance against transistor failure p. 72 Sept. 21
Interrogator circuit can tell good data from bad p. 58 July 13
Junction diode regulates low-voltage supply p. 55 Oct. 19
Laminated dissipator improves heat transfer p. 84 June 15
Low-cost time delay controls recorder p. 84 June 15
Low-noise FET's sound good to circuit designers p. 58 Dec. 14
Monostable circuits need power only when they work p. 56 Aug. 24
More for your money p. 66 Sept. 21
Network filters stabilize d-c supply over wide range p. 83 June 15
Noise-figure nomograph for multistage systems p. 64 Oct. 5
Nomograph shows phase-shift angle p. 73 July 27
Nomograph simplifies delay-line design p. 42 Nov. 30
Novel multivibrators test tape transports p. 40 Feb. 14
On and off time adjusted independently p. 50 Dec. 14
100-Mc pulse generator provides 50% duty cycle p. 42 Dec. 28
One-shot multi provides constant pulse width p. 74 Apr. 6
1,500-volt hybrid switch has low "on" impedance p. 74 Aug. 10
Operational amplifier suppresses third harmonic p. 74 Apr. 6
Oscillator generates sine, cosine waves simultaneously p. 74 Aug. 10
Positive-pulse amplifier p. 74 July 27
Push button plus scr equals fast pulse p. 41 Nov. 30
Reed switches for breadboarding p. 93 May 18
Sensistor produces long, reliable pulses p. 51 Dec. 14
Servo comparator amplifier handles high voltages p. 75 Aug. 10
Silicon controlled rectifier triggers ignitron p. 62 June 1
Simple voltage regulator limits load current p. 63 Nov. 2
Simplified r-c ladder network design p. 71 Apr. 6
Single transistor provides low-cost phase shifter p. 92 May 18

Squeeze in more components by adding a micro amplifier p. 73 Mar. 23

Staircase generator triggers a unijunction transistor p. 80 Sept. 7

Symmetrical limiting i-f reduces second harmonic p. 72 Mar. 23

Temperature rise in rigid waveguide p. 36 Jan. 17
Temperature sensor for strain-gate transducer p. 77 May 4
Thermistor measures dielectric gas content p. 54 Oct. 19
Thermostat operates with 0.01°C differential p. 65 Oct. 5
Transistor becomes sensor in temperature regulator p. 65 Nov. 2
Transistor circuit converts voltage to regulated frequency p. 73 Nov. 16
Transistor's stored charge controls pulse delay p. 52 June 29
Tunnel diode generates two microwave frequencies p. 62 Aug. 24
Tunnel diode multi recovers quickly p. 75 Sept. 21
Unijunction circuit generates specific number of pulses p. 78 May 4
Using feedback in FET circuits to reduce input capacitance p. 63 Dec. 14
Using negative reactance for independent phase and attenuation p. 44 Dec. 14
Variable-phase, polyphase from single-phase supply p. 56 Oct. 19
Variable r-f resistor attained with photocell p. 67 Oct. 5

Variable resistor controls differential amplifier gain p. 74 Nov. 16

Voltage controls dual-pulse scr trigger p. 62 Nov. 2

Voltage controls solid-state nonlinear resistance p. 36 Feb. 21

COMMUNICATION

Comsat comes on strong with a really big show: The Olympics p. 60 Oct. 5
Digital television: shrinking bulky bandwidths p. 77 Dec. 14
Early Bird: a bigger and better communications satellite p. 90 Aug. 10
Foreign broadcasts get a stronger voice p. 87 May 4
Getting transistors into single-sideband amplifiers p. 72 June 1
IEEE preview p. 35 Mar. 13
New era in telephony: Electronic switching p. 71 Oct. 19
New look for the old telegraph p. 85 Mar. 23
One circuit: phase modulation, frequency modulation p. 71 Nov. 2
Plotting coverage circles for satellite communications p. 27 Jan. 24
Pocket-size transmitter uses body heat to control frequency p. 66 July 13
Practical log-periodic antenna design p. 91 May 4
Quest for compatibility p. 79 May 18
Solid-state transmitter ready for uhf telemetry p. 76 June 1
Space-borne recorder triples packing density p. 84 Aug. 24
Sweeping carrier signals through interference p. 94 May 18
Tropo goes commercial p. 88 July 27

COMPONENTS

Attractive alternative at uhf: the ceramic vacuum tube p. 50 Aug. 24
Boost for electronic tuning: part 1 p. 49 Apr. 6
part 2 p. 61 Apr. 20
Cool world of components p. 75 June 15
Cooling high-power equipment by forced-air convection p. 69 Sept. 21
H-shaped ceramic filter forms miniature i-f p. 55 Feb. 7
Relays that challenge semiconductors p. 56 Mar. 23
Resistors improve performance while their size decreases p. 62 May 4
Simple cell competes with complex components p. 67 Nov. 16
Stray signals can't throw this desensitized switch p. 68 July 27
Wescon preview p. 60 Aug. 10

COMPUTERS

Automatic circuit tester p. 76 July 27
Balanced bipolar circuits improve magnetic shift-register performance p. 54 Oct. 5
Case for magnetic logic p. 40 June 1
Conditioned-reflex circuits p. 66 Aug. 24
Direct digital control at the threshold p. 49 Mar. 23
Direct digital control in industry p. 73 Oct. 5
Displaying the contents of a computer register p. 72 July 27
IEEE preview p. 35 Mar. 13
Incremental digital recorder puts more data on less tape p. 48 June 29
Majority voting protects aircraft and pilot p. 85 May 18
New era in telephony: Electronic switching p. 71 Oct. 19
New semiconductor networks reduce system complexity p. 25 Jan. 10
Permanent optical memories for compact systems p. 64 Apr. 20
Square-root computer uses Hall multiplier p. 30 Jan. 24
Survey of digital-logic training devices p. 71 Aug. 24
Take two tons of flour . . . p. 82 Apr. 20
Ultrasonic approach to data storage p. 67 May 4
Using a computer for circuit analysis p. 56 Nov. 2
Wescon preview p. 60 Aug. 10

CONSUMER ELECTRONICS

IEEE preview p. 35 Mar. 13
Low-cost oscillator transistors revamp uhf tuner design p. 90 Apr. 20
New ignition system for cars p. 68 Oct. 5
Transistors instead of relays tune tv volume p. 32 Feb. 28

I

INDUSTRIAL ELECTRONICS

Better and faster design by machine p. 64 June 1
Boiler control p. 85 June 15
Boredom-proof inspectors p. 79 May 4
Direct digital control at the threshold p. 49 Mar. 23
Direct digital control in industry p. 73 Oct. 5
Farewell to free time on city parking meters p. 72 Dec. 28
Finding malfunctions before they happen p. 75 Nov. 16
IEEE preview p. 35 Mar. 13
Light-activated switch expands uses of silicon controlled rectifiers p. 53 May 4
SCR control in paper mills p. 42 June 29
Take two tons of flour . . . p. 82 Apr. 20
Widening world of the scr p. 78 Sept. 21

INSTRUMENTS

Data acquisition system expects the unexpected p. 57 June 1
Digital instrumentation p. 57 May 18
Frequency sensor stabilizes triangular-wave generator p. 38 Feb. 28
IEEE preview p. 35 Mar. 13
Low-cost digital system records weather data p. 34 Jan. 10
Modified ramp generator develops high d-c input impedance p. 33 Feb. 21
Noise-proofing a digital voltmeter with off-the-shelf microelectronics p. 92 Nov. 16
Operational trigger for precise control p. 50 Nov. 2
Problem: standardizing instruments—Solution: digital systems p. 65 Oct. 19
Radar-tracking accuracy increased p. 73 May 4
Ten signals at a glance p. 54 June 29
Wescon preview p. 60 Aug. 10

M

MAGNETICS

Balanced bipolar circuits improve magnetic shift-register performance p. 54 Oct. 5
Case for magnetic logic p. 40 June 1
Magnetics: its applications in electronics p. 60 June 29
New uses for Hall-effect modulators p. 30 Jan. 17
Square-root computer uses Hall multiplier p. 30 Jan. 24

MANUFACTURING

Automatic circuit tester p. 76 July 27
Can electron beams produce incredibly small circuits? p. 82 Nov. 16
Electronics in Israel p. 23 Jan. 17
Integrated-circuit system keeps costs down to earth p. 36 Nov. 30
Linear microcircuits scarce? Now you can breadboard your own p. 58 Oct. 19
Modern electronics packaging p. 33 Feb. 7
Photo-etching thin-film circuits p. 94 June 15
Precision electron welder uses low beam voltage p. 32 Mar. 6
Production-line packaging of solid-state circuits p. 73 Sept. 7

MARKETS

Electronics markets p. 37 Jan. 3

MEASUREMENTS

Direct-reading meter gives impedance and phase angle p. 57 Jan. 3
How to measure FET noise p. 62 Nov. 30
Linear scales show mixer harmonics p. 37 Jan. 10
New use for the oscilloscope: measuring signal-to-noise ratio p. 36 Dec. 28
Quinary scalers measure time intervals digitally p. 34 Jan. 31
Testing transistors in-circuit p. 53 June 1
Thermistor measures dielectric gas content p. 54 Oct. 19

MEDICAL ELECTRONICS

Electronic weapon against cancer p. 88 Apr. 6
Paralytic's brain + Myocoder = Hope p. 74 Nov. 30

MICROELECTRONICS

Can electron beams produce incredibly small circuits? p. 82 Nov. 16
Depositing active and passive thin-film elements on one chip p. 53 Apr. 20
Digital loran-C receiver uses microcircuits p. 23 Jan. 31
Forward step in microcircuits: Thin-film transistors from scanning generator p. 23 Feb. 21
The frustrating problem of inductors in integrated circuits p. 50 Mar. 13
How to design micropower transistor amplifiers: part 1 p. 73 May 18
part 2 p. 48 June 1
Integrated circuits shrink a doppler radar system p. 74 Mar. 23
Linear microcircuits scarce? Now you can breadboard your own p. 58 Oct. 19
Low-frequency integrated circuits achieved with thermal transfer p. 54 July 27
Molecular blocks simplify microcircuits p. 36 Feb. 14
Noise-proofing a digital voltmeter with off-the-shelf microelectronics p. 92 Nov. 16
Squeeze in more components by adding a micro amplifier p. 73 Mar. 23
Wescon preview p. 60 Aug. 10

MICROWAVES

Charge storage varactors boost harmonic power p. 42 July 13
Comsat comes on strong with a really big show: The Olympics p. 60 Oct. 5
Interferometer analyzes microwave transmitter p. 58 June 29
Metal base transistor pushes back the frequency barrier p. 42 Mar. 13
Microwaves for remote sensing p. 66 Nov. 2
New magnetron shifts frequency fast p. 76 Apr. 6
Research in microwave acoustics spawns compact delay lines p. 69 Nov. 30
Superpower tubes: their capabilities and limitations p. 48 July 13
Tunnel diode generates two microwave frequencies p. 62 Aug. 24
Wescon preview p. 60 Aug. 10

MILITARY ELECTRONICS

Electro-optics: modern war-game munitions p. 27 Mar. 6
IEEE preview p. 35 Mar. 13
New magnetron shifts frequency fast p. 76 Apr. 6
Quest for compatibility p. 79 May 18
Silent war: electronic spying p. 74 Apr. 20
USS Dace: portrait of a killer p. 99 June 15

O

OCEANOGRAPHY

Frontier of the deep p. 71 July 13

R

RADAR

Cutting through clutter in flight-control radar p. 83 Aug. 10
Integrated circuits shrink a doppler radar system p. 74 Mar. 23
Radar-tracking accuracy improved p. 73 May 4
Research in microwave acoustics spawns compact delay lines p. 69 Nov. 30
Sampling ten million words a second p. 52 Feb. 7

S

SOLID-STATE ELECTRONICS

Analog switching circuits use field-effect devices p. 46 Dec. 28
Beating the heat in semiconductor devices p. 92 Sept. 7
Boosting d-c voltage with silicon transistors p. 56 Nov. 16
Charge storage varactors boost harmonic power p. 42 July 13
Designing noise immunity into high-speed circuits p. 66 Sept. 7
Designing with low-noise MOS FET's: a little different but no harder p. 53 Dec. 14
Drivers for optical diodes p. 77 Aug. 10
FET complementary integrated circuits: aerospace natural p. 55 Dec. 28
FET micropower amplifier p. 74 Dec. 14
Field-effect transistor: a "curiosity" comes of age p. 46 Nov. 30
Field-effect transistor as high-frequency amplifier p. 71 Dec. 14
Future of thin-film active devices p. 23 Jan. 24
How to measure FET noise p. 62 Nov. 30
How to suppress rate effect in pnpn devices p. 30 Jan. 10
IEEE preview p. 35 Mar. 13
Interrogator circuit can tell good data from bad p. 58 July 13
Light-activated switch expands uses of silicon-controlled rectifiers p. 53 May 4
Liquid cooling p. 101 Sept. 7
Long-pin approach to dissipator design p. 99 Sept. 7
Low-frequency integrated circuits achieved with thermal transfer p. 54 July 27
Low-noise FETs sound good to circuit designers p. 58 Dec. 14
Magnetoresistance: better than Hall-effect multipliers p. 66 Apr. 6
Metal-oxide-semiconductor field-effect transistors p. 50 Nov. 30
Modules simplify design of complex functions p. 50 Dec. 28
New semiconductor networks reduce system complexity p. 25 Jan. 10
New technology sparks an expansion for germanium p. 62 Apr. 6
Now the gate turn-off switch speeds up d-c switching p. 64 Mar. 23
Optoelectronics at work p. 58 July 27
Orbiting observatory to measure stars' dim light p. 28 Feb. 28
Paramp system achieves high stability p. 34 Feb. 28
P-n junctions as radiation sources p. 61 July 13
Scanning the sun for solar flares p. 31 Feb. 14
Space-borne recorder triples packing density p. 84 Aug. 24
Space radiation affects MOS FET's p. 59 Dec. 28

T

TRANSISTORS

Boosting d-c voltage with silicon transistors p. 56 Nov. 16
Chart provides alpha components p. 72 Nov. 16
Depositing active and passive thin-film elements on one chip p. 53 Apr. 20
Designing noise immunity into high-speed circuits p. 66 Sept. 7
Designing with low-noise MOS FET's: a little different but no harder p. 53 Dec. 14
FET micropower amplifier p. 74 Dec. 14
Field-effect transistor: a "curiosity" comes of age p. 46 Nov. 30
Field-effect transistor as high-frequency amplifier p. 71 Dec. 14
Forward step in microcircuits: Thin-film transistors form scanning generator p. 23 Feb. 21
Germanium transistor as avalanche switch p. 44 Nov. 30
Helpful transistor analog: 4-layer pnpn = 2 transistors p. 66 Aug. 10
How to measure FET noise p. 62 Nov. 30
Insurance against transistor failure p. 72 Sept. 21
Low-cost oscillator transistors revamp uhf tuner design p. 90 Apr. 20

Low-noise FET's sound good to circuit designers p. 58 Dec. 14
Metal base transistor pushes back the frequency barrier p. 42 Mar. 13
Metal-oxide-semiconductor field-effect transistors p. 50 Nov. 30
Modules simplify design of complex functions p. 50 Dec. 28
New technology sparks an expansion for germanium p. 62 Apr. 6
Preventing second breakdown in transistor circuits p. 66 June 15
Researchers turn to germanium for a MOS field-effect transistor p. 64 Nov. 30
Silicon replacing germanium as power transistors get bigger p. 42 Nov. 2
Space radiation affects MOS FET's p. 59 Dec. 28
Staircase generator triggers a unijunction transistor p. 80 Sept. 7
Testing transistors in-circuit p. 53 June 1
Trading off radiation resistance and second-breakdown performance p. 48 Oct. 19
Transistor becomes sensor in temperature regulator p. 65 Nov. 2
Transistor bridge switches microvolts p. 60 Jan. 3
Transistor circuit converts voltage to regulated frequency p. 73 Nov. 16
Transistors instead of relays tune tv volume p. 32 Feb. 28
Understanding and using the MOS FET p. 66 Dec. 14
Using feedback in FET circuits to reduce input capacitance p. 63 Dec. 14

Author index

A

Aaland, K. & Hill, R., Precision electron welder uses low beam voltage p. 32 Mar. 6
Ahn, B. S., Germanium transistor as avalanche switch p. 44 Nov. 30
Allen, R. J. & Niehenke, E., The cool world of components p. 75 June 15
Ammann, S. K., Noise-proofing a digital voltmeter with off-the-shelf microelectronics p. 92 Nov. 16
Andren, C., High-efficiency voltage regulator p. 64 Aug. 24
Andres, R. K. & Correard, L. P., A new look for the old telegraph p. 85 Mar. 23
Angel, K. W., Graphs aid deflection system design p. 59 Feb. 7
Anton, A., Comparator controls battery charging rate p. 72 Mar. 23
Arnold, J. G., Pocket-size transmitter uses body heat to control frequency p. 66 July 13
Ashby, A. T. et al, Testing transistors in-circuit p. 53 June 1
Austin, N. A., Electronic weapon against cancer p. 88 Apr. 6

B

Bailey, R. W., Push button plus scr equals fast pulse p. 41 Nov. 30
Barnes, H. B. & Luettgenau, G. G., Designing with low-noise MOS FET's: a little different but no harder p. 53 Dec. 14
Beeler, F., Incremental digital recorder puts more data on less tape p. 48 June 29
Beene, G., Variable resistor controls differential amplifier gain p. 74 Nov. 16
Bell, S. A., Adder transistor decreases multivibrator reset time p. 72 July 27
Blais, P. D., Checking oscillation in cathode followers p. 52 Oct. 19
Blumenthal, R. H. & Williams, F. E., Transistor's stored charge controls pulse delay p. 52 June 29
Bonin, E. L., Drivers for optical diodes p. 77 Aug. 10
Borkan, H., Depositing active and passive thin-film elements on one chip p. 53 Apr. 20
Bouchard, R. J., Positive-pulse amplifier p. 74 July 27
Breece, H. T., III, Boosting d-c voltage with silicon transistors p. 56 Nov. 16
Buchhold, T. A., Cryogenic flux pump switches high currents p. 61 Mar. 23

C

Caddes, D. E. & McMurtry, B. J., Evaluating light demodulators p. 54 Apr. 6
Callahan, T. & Cuikay, R., Orbiting observatory to measure stars' dim light p. 28 Feb. 28
Callahan, T. & Vuozzo, A., Drive-brake circuit positions ultraviolet spectrometer in spacecraft p. 47 Mar. 13
Carlson, F. M., Tunnel-diode circuits invert direct to alternating current p. 56 Sept. 21
Carroll, F. L., How to achieve stability in space telemetry p. 32 Jan. 24
Carroll, J. M., The quest for compatibility p. 79 May 18
The silent war: electronic spying p. 74 Apr. 20
USS Dace: portrait of a killer p. 99 June 15
Carroll, J. M. & Hood, H. C., Frontier of the deep p. 71 July 13
Carroll, J. M. et al, Electronics markets p. 37 Jan. 3
Caywood, W. P., Jr. et al, Using negative reactance for independent phase and attenuation p. 44 Dec. 14
Charters, T. H., Low-cost time delay controls recorder p. 84 June 15
Chiles, W. H. & Lafuse, H. G., Sweeping carrier signals through interference p. 94 May 18
Chubbuck, E. L., Jr., Foreign broadcasts get a stronger voice p. 87 May 4
Cohen, J. M., How to measure FET noise p. 62 Nov. 30
Collins, J. J., Constant-current source controls sweep rate p. 82 Sept. 7
Displaying the contents of a computer register p. 72 July 27
Single transistor provides low-cost phase shifter p. 92 May 18
Cook, A. D. & Daniels, R. E., Cold-cathode gas tubes switch high voltage fast p. 72 Apr. 20
Cook, C. R., Jr., & Martin, B. M., New semiconductor networks reduce system complexity p. 25 Jan. 10
Coppen, P. J., FET complementary integrated circuits: aerospace natural p. 55 Dec. 28
Cordes, E. V., Jr., Boredom-proof inspectors p. 79 May 4
Correard, L. P. & Andres, R. K., A new look for the old telegraph p. 85 Mar. 23
Cottrell, D. E., Frequency sensor stabilizes triangular-wave generator p. 38 Feb. 28
Crothers, M. H., Added capacitor sweeps power supply p. 62 June 1
Cuikay, R. & Callahan, T., Orbiting observatory to measure stars' dim light p. 28 Feb. 28

D

Dakin, C. J., Novel multivibrators test tape transports p. 40 Feb. 14
Daniels, R. E. & Cook, A. D., Cold-cathode gas tubes switch high voltage fast p. 72 Apr. 20
Dargis, A. A., A high performance voltage regulator p. 75 Apr. 6
On and off time adjusted independently p. 50 Dec. 14
DeNegri, F. P., Permanent optical memories for compact systems p. 64 Apr. 20
Deveraux, H. R., Diamond circuit measures phase shift p. 74 Sept. 21
Domchick, R. J. & Sleven, R. L. Paramp system achieves high stability p. 34 Feb. 28
Dooley, H., SCR control in paper mills p. 42 June 29
Down, B., Using feedback in FET circuit to reduce input capacitance p. 63 Dec. 14
Downs, N. & van Sutphin, B., Solid-state transmitter ready for uhf telemetry p. 76 June 1
Dulberger, L. H., Low-cost oscillator transistors revamp uhf tuner design p. 90 Apr. 20
Dulberger, L. H. et al, Electronics markets p. 37 Jan. 3
Durocher, A. J., D-c voltage converter needs no transformer p. 64 Nov. 2

E

Eastman, L. F., Superpower tubes: their capabilities and limitations p. 48 July 13
Eberle, J. W., A new use for the oscilloscope: measuring signal-to-noise ratio p. 36 Dec. 28
Edwards, R. E., New magnetron shifts frequency fast p. 76 Apr. 6
Eimbinder, J., Profile: the heat-sink industry p. 84 Sept. 7
The field-effect transistor: a "curiosity" comes of age p. 46 Nov. 30
Engelmann, R., Quinary scalers measure time intervals digitally p. 34 Jan. 31
Epstein, H. & Flanagan, C., Insurance against transistor failure p. 72 Sept. 21
Ernst, L. J., Complementary amplifier offers high input impedance p. 92 May 18
Evanzia, W. J., Cutting through clutter in flight-control radar p. 83 Aug. 10
SST: challenge to avionics designers p. 60 Sept. 7

F

Fadely, J. K. et al, Digital television: shrinking bulky bandwidths p. 77 Dec. 14
Fairley, D. O., One circuit: phase modulation, frequency modulation p. 71 Nov. 2
Feitler, H., Simple cell competes with complex components p. 67 Nov. 16
Feldman, C., The future of thin-film active devices p. 23 Jan. 24
Ferrie, R. G., Thermostat operates with 0.01°C differential p. 65 Oct. 5
Unijunction circuit generates specific number of pulses p. 78 May 4
Fines, N. R., Chart provides alpha components p. 72 Nov. 16
Flanagan, C. & Epstein, H., Insurance against transistor failure p. 72 Sept. 21
Flynn, G. J., Digital instrumentation p. 57 May 18
Frank, R. L. & Phillips, A. H., Digital loran-C receiver uses microcircuits p. 23 Jan. 31
Frenzel, L. E., Jr., Gate circuit eliminates pedestal effect p. 77 May 4
Silicon controlled rectifier triggers ignitron p. 62 June 1
Freytag, R. W. & Gratian, J. W., Ultrasonic approach to data storage p. 67 May 4
Frye, E. O., Microwaves for remote sensing p. 66 Nov. 2

G

Garibotti, D. J. & Ullery, L. R., Jr., Production-line packaging of solid-state circuits p. 73 Sept. 7
Gault, J. M. & Sanford, R. J., Stray signals can't throw this desensitized switch p. 68 July 27
Geppert, D. V. & Mueller, R. A., Metal base transistor pushes back the frequency barrier p. 42 Mar. 13
Gertz, D. & Leavitt, L., Problem: standardizing instruments—Solution: digital systems p. 65 Oct. 19
Gilson, R. et al, How to design micropower transistor amplifiers: part 1 p. 73 May 18
part 2 p. 98 June 1
Gipp, D. R., Designing noise immunity into high-speed circuits p. 66 Sept. 7
Giroux, R. R. & Hughes, H. L., Space radiation affects MOS FET's p. 59 Dec. 28
Goldman, W. E., Torque and thermal resistance p. 104 Sept. 7
Goldwater, F. J., Low-cost digital system records weather data p. 34 Jan. 10
Gomolak, L. S., Better and faster design by machine p. 64 June 1
Direct digital control in industry p. 73 Oct. 5
Take two tons of flour . . . p. 82 Apr. 20
Grafham, D. R., Now the gate turn-off switch speeds up d-c switching p. 64 Mar. 23
Gratian, J. W. & Freytag, R. W., Ultrasonic approach to data storage p. 67 May 4
Gray, S. B., A survey of digital-logic training devices p. 71 Aug. 24
Greenblatt, S., Transistor becomes sensor in temperature regulator p. 65 Nov. 2
Grelot, M., Nomograph shows phase-shift angle p. 73 July 27
Griswold, D. M., Understanding and using the MOS FET p. 66 Dec. 14
Grossman, D. & Merlen, M., Interrogator circuit can tell good data from bad p. 58 July 13
Gulbenk, J. & Prosser, T. F., How modules make complex design simple p. 50 Dec. 28
Gutlove, N. & Morrison, S., Scanning the sun for solar flares p. 31 Feb. 14

H

Hakim, E. B. & Reich, B., Trading off radiation resistance and second-breakdown performance p. 48 Oct. 19
Hakimoglu, A. & Kulvin, R. D., Sampling ten million words a second p. 52 Feb. 7
Hammond, J. H., Jr. & Murphree, F. J., High gain d-c amplifier drives crt display p. 53 June 29
Harrap, V. et al, Researchers turn to germanium for a MOS field-effect transistor p. 64 Nov. 30
Harrison, L., Paralytic's brain + Myocoder = Hope p. 74 Nov. 30
Hayes, A. R., Electronically controlling auto's engine spark p. 43 Dec. 28
Heffner, P., Tunnel diode multi recovers quickly p. 75 Sept. 21
Hegner, H. R. et al, Testing transistors in-circuit p. 53 June 1
Heiman, F. P. & Hofstein, S. R., Metal-oxide-semiconductor field-effect transistors p. 50 Nov. 30
Hejhall, R. C., Getting transistors into single-sideband amplifiers p. 72 June 1
Hey, J. C., The widening world of the scr p. 78 Sept. 21
Hilbinger, A. R., New uses for Hall-effect modulators p. 30 Jan. 17
Hill, R. & Aaland, K., Precision electron welder uses low beam voltage p. 32 Mar. 6
Hilles, L. M., Compressor amplifier features balanced push-pull circuit p. 36 Jan. 24
Hines, H. W. & Radzik, L. C., Electronic timer provides long delay p. 63 June 1
Hofstein, S. R. & Heiman, F. P., Metal-oxide-semiconductor field-effect transistors p. 50 Nov. 30
Holcombe, W., Relays that challenge semiconductors p. 56 Mar. 23
Hood, H. C. & Carroll, J. M., Frontier of the deep p. 71 July 13
Hoisington, D. B., Double-tuning simplifies superhets p. 39 Jan. 24
Houston, J. A., Electro-optics: modern war-game munitions p. 27 Mar. 6
Howell, E. K., Light-activated switch expands uses of silicon-controlled rectifiers p. 53 May 4
Hughes, H. L. & Giroux, R. R., Space radiation affects MOS FET's p. 59 Dec. 28
Hunter, C. M. & Rich, E., Jr., Bird's-eye view of the weather p. 81 July 27

I

Ishii, K. et al, Tunnel diode generates two microwave frequencies p. 62 Aug. 24

J

Jacoby, J. H., Long-pin approach to dissipator design p. 99 Sept. 7
Jones, C. I. et al, Using negative reactance for independent phase and attenuation p. 44 Dec. 14

K

Kalfaian, M. V., Transistor bridge switches microvolts p. 60 Jan. 3
Karlov, F. J. & Smoot, C. H., Boiler control p. 85 June 15
Katz, A. S., Space-borne recorder triples packing density p. 84 Aug. 24
Katz, L., Cooling high-power equipment by forced-air convection p. 69 Sept. 21
Kawakami, M. et al, H-shaped ceramic filter forms miniature i-f p. 55 Feb. 7
King, B. C. et al, Digital television: shrinking bulky bandwidths p. 77 Dec. 14
King, J. & Rogers, J., The case for magnetic logic p. 40 June 1
King, S. & Pacifico, E. M., Integrated circuits shrink a doppler radar system p. 74 Mar. 23
Kirkpatrick, R. F. & Stouffer, R. C., Symmetrical limiting i-f reduces second harmonic p. 72 Mar. 23
Kiss, W. et al, How to design micropower transistor amplifiers: part 1 p. 73 May 18
part 2 p. 48 June 1
Kleinberg, L. L., Complementary shaper replaces Schmitt trigger p. 66 Oct. 5
Monostable circuits need power only when they work p. 56 Aug. 24
Sensistor produces long, reliable pulses p. 51 Dec. 14

Kloch, H. F. & Schoeffler, J. D., Direct digital control at the threshold p. 49 Mar. 23
Knight, J. M. et al, Digital television: shrinking bulky bandwidths p. 77 Dec. 14
Knight, M. B., Reed switches for breadboarding p. 93 May 18
Kohnke, G. H. P., Simple voltage regulator limits load current p. 63 Nov. 2
Kolk, P. E. & Maloff, I. A., The field-effect transistor as high-frequency amplifier p. 71 Dec. 14
Kopski, R. L. & Weldon, L. A., Boost for electronic tuning: part 1 p. 49 Apr. 6 part 2 p. 61 Apr. 20
Kruse; J. R., Automatic tv tracker keeps eye on missiles p. 82 Apr. 6
Kuehler, H. et al, Researchers turn to germanium for a MOS field-effect transistor p. 64 Nov. 30
Kulvin, R. D. & Hakimoglu, A., Sampling ten million words a second p. 52 Feb. 7

L

Lafuse, H. G. & Chiles, W. H., Sweeping carrier signals through interference p. 94 May 18
Lamorte, M. F. & Liebert, R. B., P-n junctions as radiation sources p. 61 July 13
Landress, K. B., New technology sparks an expansion for germanium p. 62 Apr. 6
Leavitt, L. & Gertz, D., Problem: standardizing instruments—Solution: digital systems p. 65 Oct. 19
Lefferts, P., Operational trigger for precise control p. 50 Nov. 2
Levine, D. & Welch, W. H., Plotting coverage circles for satellite communications p. 27 Jan. 24
Levine, S., Silicon replacing germanium as power transistors get bigger p. 42 Nov. 2
Liebert, R. B. & Lamorte, M. F., P-n junctions as radiation sources p. 61 July 13
Lovelace, B. K. et al, Researchers turn to germanium for a MOS field-effect transistor p. 64 Nov. 30
Luettgenau, G. G. & Barnes, H. B., Designing with low-noise MOS FET's: a little different but no harder p. 53 Dec. 14
Lund, P., Direct-reading meter gives impedance and phase angle p. 57 Jan. 3

M

MacDonald, W. W., Electronics in Israel p. 23 Jan. 17
MacDougall, J. S., Servo comparator amplifier handles high voltages p. 75 Aug. 10
Maeda, H. et al, H-shaped ceramic filter forms miniature i-f p. 55 Feb. 7
Maine, R. W., Generating two rectangular waves p. 82 June 15
Maloff, I. A. & Kolk, P. E., The field-effect transistor as high-frequency amplifier p. 71 Dec. 14
Martin, B. M. & Cook, C. R., Jr., New semiconductor networks reduce system complexity p. 25 Jan. 10
Matzen, W. T. & Meadows, R. A., Low-frequency integrated circuits achieved with thermal transfer p. 54 July 27
McAdam, J. C., Beating the heat in semiconductor devices p. 92 Sept. 7
McKenzie, A. A., Modern electronics packaging p. 33 Feb. 7
New era in telephony: Electronic switching p. 71 Oct. 19
Tropo goes commercial p. 88 July 27
Wanted: ways to spot rough air p. 49 Feb. 7
McMaster, R. C., Finding malfunctions before they happen p. 75 Nov. 16
McMurtry, B. J. & Caddes, D. E., Evaluating light demodulators p. 54 Apr. 6
Meadows, R. A. & Matzen, W. T., Low-frequency integrated circuits achieved with thermal transfer p. 54 July 27
Meieran, S., Temperature sensor for strain-gate transducer p. 77 May 4
Meindl, J. D. et al, How to design micropower transistor amplifiers: part 1 p. 73 May 18 part 2 p. 48 June 1
Merlen, M. & Grossman, D., Interrogator circuit can tell good data from bad p. 58 July 13
Mickelwait, A. B. & Spangler, E. R., Dolling up a space probe p. 80 Mar. 23
Monser, G. J., Practical log-periodic antenna designs p. 91 May 4
Moreines, H. et al, Majority voting protects aircraft and pilot p. 85 May 18
Morrison, S. & Gutlove, N., Scanning the sun for solar flares p. 31 Feb. 14
Moyer, L. K., Circuit always applies correct operating voltage p. 77 Sept. 21
Mueller, R. A. & Geppert, D. V., Metal base transistor pushes back the frequency barrier p. 42 Mar. 13
Munich, A. E., Basic uhf circuit forms amplifiers and multipliers p. 59 July 13
Murphree, F. J. & Hammond, J. H., Jr., High-gain d-c amplifier drives crt display p. 53 June 29
Murphy, E. B., Thermistor measures dielectric gas content p. 54 Oct. 19
Murphy, R. H., Static alternator controls three-phase motor p. 30 Jan. 31
Murphy, T. F. et al, Tunnel diode generates two microwave frequencies p. 62 Aug. 24

N

Nakayama, Y. & Odagawa, K., Storage orthicon holds image for hours p. 36 Mar. 6
Newell, W. E., The frustrating problem of inductors in integrated circuits p. 50 Mar. 13
Newhall, E. E., Balanced bipolar circuits improve magnetic shift-register performance p. 54 Oct. 5
Neu, F. D., Voltage controls solid-state nonlinear resistance p. 36 Feb. 21
Niehenke E. & Allen, R. J., The cool world of components p. 75 June 15
Novotny, G. V., comeback for wireless power? p. 86 Sept. 21

O

Odagawa, K. & Nakayama, Y., Storage orthicon holds image for hours p. 36 Mar. 6
Okamura, S. & Tanaka, S., Rotating subreflector produces circular scanning p. 44 Feb. 14
Oleson, H. H. L., Designing against space radiation: part 1 p. 61 Dec. 28
Osborne, W. E., Farewell to free time on city parking meters p. 72 Dec. 28

P

Pacifico, E. M. & King, S., Integrated circuits shrink a doppler radar system p. 74 Mar. 23
Panico, J. J., Staircase generator triggers a unijunction transistor p. 80 Sept. 7
Pearman, C. R. & Popodi, A. E., How to design high-speed d-a converters p. 28 Feb. 21
Peddie, J. G., Network filters stabilize d-c supply over wide range p. 83 June 15
Oscillator generates sine, cosine waves simultaneously p. 74 Aug. 10
Pendleton, F. A., Integrated-circuit system keeps costs down to earth p. 36 Nov. 30
Phelps, J. H., Transistors instead of relays tune tv volume p. 32 Feb. 28
Phillips, A. H. & Frank, R. L., Digital loran-C receiver uses microcircuits p. 23 Jan. 31
Pierson, G. et al, Researchers turn to germanium for a MOS field-effect transistor p. 64 Nov. 30
Pitzalis, O. et al, How to design micropower transistor amplifiers: part 1 p. 73 May 18 part 2 p. 48 June 1
Popodi, A. E. & Pearman, C. R., How to design high-speed d-a converters p. 28 Feb. 21
Prosser, T. F. & Gulbenk, J., How modules make complex design simple p. 50 Dec. 28

R

Radzik, L. C. & Hines, H. W., Electronic timer provides long delay p. 63 June 1
Raga, G. L. et al, Digital television: shrinking bulky bandwidths p. 77 Dec. 14
Revall, D. R. et al, Tunnel diode generates two microwave frequencies p. 62 Aug. 24
Reich, B., & Hakim, E. B., Trading off radiation resistance and second-breakdown performance p. 48 Oct. 19
Rhoades, W. T., 100-Mc pulse generator provides 50% duty cycle p. 42 Dec. 28
Rich, E., Jr. & Hunter, C. M., Bird's-eye view of the weather p. 81 July 27
Robertson, J. G., Light-airplane marker-beacon receiver p. 33 Jan. 17
Robertson, R., Interferometer analyzes microwave transmitter p. 58 June 29
Robinson, D. D., Diode-coupled Schmitt trigger p. 50 Dec. 14
Linear microcircuits scarce? Now you can breadboard your own p. 58 Oct. 19
Rodgers, G. V., Lens-line antenna: low noise, less space p. 25 Feb. 28
Rodrigue, G. P., Research in microwave acoustics spawns compact delay lines p. 69 Nov. 30
Rogers, J. & King, J., The case for magnetic logic p. 40 June 1
Ross, T. C., Field-effect transistor controls pulse oscillator p. 80 June 15
Rush, J. W., Jr., Attractive alternative at uhf: the ceramic vacuum tube p. 50 Aug. 24
Russell, J. E., Ten signals at a glance p. 54 June 29

S

Sanford, R. J. & Gault, J. M., Stray signals can't throw this desensitized switch p. 68 July 27
Schaffner, G., Charge storage varactors boost harmonic power p. 42 July 13
Schiff, P., Preventing second breakdown in transistor circuits p. 66 June 15
Schmidt, M., Operational amplifier suppresses third harmonic p. 74 Apr. 6
Schoeffler, J. D. & Kloch, H. F., Direct digital control at the threshold p. 49 Mar. 23
Schroeder, F. H., & Wennerberg, A. L., High-current converter is small, quiet, low-cost p. 41 Nov. 30
Schweitzer, J. C., & Van Houten, R., A new ignition system for cars p. 68 Oct. 5
Scidmore, A. K., Junction diode regulates low-voltage supply p. 55 Oct. 19
Segatis, E., Circuit protects amplifier against short circuit p. 61 Aug. 24
Shaifer, T. R. & others, Testing transistors in-circuit p. 53 June 1
Shenoalis, L. D., Data acquisition system expects the unexpected p. 57 June 1
Comsat comes on strong with a really big show: The Olympics p. 60 Oct. 5
Sherwin, J. S., Sr., An FET micropower amplifier p. 74 Dec. 14
Sideris, G., Can electron beams produce incredibly small circuits? p. 82 Nov. 16
Shipley, M., Analog switching circuits use field-effect devices p. 46 Dec. 28
Sing, C., Advantages of free-running cascode multivibrators p. 28 Jan. 31
Skanns, C. W., Photo-etching thin-film circuits p. 94 June 15
Sleven, R. L. & Domchick, R. J., Paramp system achieves high stability p. 34 Feb. 28
Smith, B., Low-noise FET's sound good to circuit designers p. 58 Dec. 14
Smith, F. E., Buffer supplies bipolar output p. 75 July 27
Smith, J. R., Jr., Amplifier can be adjusted to cancel unbalanced noise p. 60 Aug. 24
Smoot, C. H. & Karlov, F. J., Boiler control p. 85 June 15
Spangler, E. R. & Mickelwait, A. B., Dolling up a space probe p. 80 Mar. 23
Stevens, R. T., Linear scales show mixer harmonics p. 37 Jan. 10
One-shot multi provides constant pulse width p. 74 Apr. 6
Stewart, C. H. & Vincent, G. J., Radar-tracking accuracy increased p. 73 May 4
Stasior, R. A., Helpful transistor analog: 4-layer pnpn = 2 transistors p. 66 Aug. 10
Stasior, R. A., How to suppress rate effect in pnpn devices p. 30 Jan. 10
Stouffer, R. C. & Kirkpatrick, R. F., Symmetrical limiting i-f reduces second harmonic p. 72 Mar. 23
Strasser, J. A., Early Bird: a bigger and better communications satellite p. 90 Aug. 10
Strasser, J. A. et al, Electronics markets p. 37 Jan. 3
Sun, S. F., Magnetoresistance: better than Hall-effect multipliers p. 66 Apr. 6
Sununu, J. H., Liquid cooling p. 101 Sept. 7

T

Tanaka, S. & Okamura, S., Rotating subreflector produces circular scanning p. 44 Feb. 14
Thomas, F. et al, Majority voting protects aircraft and pilot p. 85 May 18
Thomas, R. E., 1500-volt hybrid switch has low "on" impedance p. 74 Aug. 10
Tripple, K. R., Noise-figure nomograph for multistage systems p. 64 Oct. 5
Trunk, E., Laminated dissipator improves heat transfer p. 84 June 15
More for your money p. 66 Sept. 21
Tsuchiya, H. et al, H-shaped ceramic filter forms miniature i-f p. 55 Feb. 7

U

Ullery, L. R., Jr. & Garibotti, D. J., Production-line packaging of solid-state circuits p. 73 Sept. 7
Uno, M., Amplifier improves peak voltmeter response p. 73 Apr. 20
Uzunoglu, V. & White, M. H., Molecular blocks simplify microcircuits p. 36 Feb. 14

V

Van Houten, R. & Schweitzer, J. C., A new ignition system for cars p. 68 Oct. 5
van Sutphin, B. & Downs, N., Solid-state transmitter ready for uhf telemetry p. 76 June 1
Vaughan T. J., Temperature rise in rigid waveguide p. 36 Jan. 17
Vincent, G. J. & Stewart, C. H., Radar-tracking accuracy increased p. 73 May 4
Vithayathil, J. J., Variable-phase, polyphase from single-phase supply p. 56 Oct. 19
Voelker, W. H., Transistor circuit converts voltage to regulated frequency p. 73 Nov. 16
Vuozzo, A. & Callahan, T., Drive-brake circuit positions ultraviolet spectrometer in spacecraft p. 47 Mar. 13

W

Wade, N. A., Combined feedback stabilizes amplifier p. 76 May 4
Wagner, R. H., Variable r-f resistor attained with photocell p. 67 Oct. 5
Wakeen, K., Automatic circuit tester p. 76 July 27
Wall, H. M., Using a computer for circuit analysis p. 56 Nov. 2
Wehr, K. C., Conditioned-reflex circuits p. 66 Aug. 24
Weinberg, R. C., Modified ramp generator develops high d-c input impedance p. 33 Feb. 21
Welch, W. H. & Levine, D., Plotting coverage circles for satellite communications p. 27 Jan. 24
Weldon, L. A. & Kopski, R. L., Boost for electronic tuning: part 1 p. 49 Apr. 6 part 2 p. 61 Apr. 20
Wellard, C. L., Resistors improve performance while their size decreases p. 62 May 4
Wennerberg, A. L. & Schroeder, F. H., High-current converter is small, quiet, low-cost p. 41 Nov. 30
Wieder, H. H., Square-root computer uses Hall multiplier p. 30 Jan. 24
Wieder, H. W., Four-layer diodes form staircase generator p. 55 July 13
White, C. F., Simplified r-c ladder network design p. 71 Apr. 6
White, M. H. & Uzunoglu, V., Molecular blocks simplify microcircuits p. 36 Feb. 14
Williams, E. M. et al, Using negative reactance for independent phase and attenuation p. 44 Dec. 14
Williams, F. E. & Blumenthal, R. H., Transistor's stored charge controls pulse delay p. 52 June 29
Wilson, T., Voltage controls dual-pulse scr trigger p. 62 Nov. 2
Wold, R. J., 4-terminal controlled switch divides frequencies by 10 p. 81 June 15
Wolff, M. F., Forward step in microcircuits: Thin-film transistors form scanning generator p. 23 Feb. 21
Worthington, R. et al, Majority voting protects aircraft and pilot p. 85 May 18
Wunderman, I., Optoelectronics at work p. 58 July 27

Y

Young, L. H., Wescon preview p. 60 Aug. 10

Z

Zane, R., Nomograph simplifies delay-line design p. 42 Nov. 30
Zukowsky, W. S., Aligning Saturn missile's guidance system p. 26 Feb. 21